Information Deliverables Specifications for Science Projects Southwest Alaska Network

PROJECT CHECKLIST

Project: _____

Date: _____

Contract: _____

Completed (date)	Deliverable	Required (due date)	Optional (due date)	Notes
	Study Plan			
	Project Organizer			
	Field Data Sheets			
	Tabular Data			
	GIS Data			
	Photographs			
	Data Collection Protocols			
	Data Documentation			
	Information Discovery			
	Project Safety Manual			
	Reports			

Notes/Specifications:

Information Deliverables Specifications for Science Projects
Southwest Alaska Network

March 16, 2004 <mark>Draft</mark>

Website:

For details on specifications, visit:
http://www.nature.nps.gov/im/units/swan/
Under "Data Management >> SWAN Specifications"

Scientific Data Deliverables

Unless otherwise specified in the Study Plan, by April of the calendar year following funding, the researcher will provide the NPS with a CD or DVD containing the following organized and documented information:

- Study plan
- Project organizer
- Field data sheets
- Tabular data
- GIS data
- Photographs
- Data collection protocols
- Data documentation
- Information discovery
- Project Safety Manual
- Reports

All data should be organized in a logical and consistent folder structure. The basic folder structure presented in the document "IM Project Organizer Template" should be used as a starting point.

Multi-year projects will deliver data on a yearly basis.

CDs or DVD should be properly labeled with the following information:
- Project title
- Project contact information
- Date the media was written
- Version, if applicable

Study Plan

Deliverable:
Study Plan written and provided in MS Word.

Definition:
The "Detailed Study Plan for a Project" is a complete description of the work that an individual or group has proposed to conduct to meet certain goals or objectives of the I&M Program.

Purpose:
The purpose of a detailed study plan is to ensure that all the elements needed for a project to be successful are there. The detailed study plan provides the final vehicle for approval of a project by the NPS.

When is a study plan prepared?
The study plan is prepared once the proposal is approved. Approval of the proposal signals approval of the project concept. Approval of the Detailed Study Plan signals approval of the project concept and details and any NPS funding.

Author of the Study Plan:
Authors are the Principal Investigator, either within or outside of NPS.

Suggested Length:
10-15 pages

Brief Description:
A "Detailed Study Plan for a Project" must contain information such as the project objectives or questions being addressed, the nature of the proposed work, methods to be used, anticipated products, work schedule and timelines, qualifications of individuals and organizations, and costs, all of which are presented in a standard format. A study plan communicates to NPS staff, peer reviewers, and decision-makers all information necessary to understand what will be done. The detailed study plan provides the details necessary to ascertain that the work has a high probability of being carried out in a successful manner, provides the final vehicle for approval of the project, and provides the information needed to determine whether the project has been successful when it is complete.

Guidelines:
Alaska Region, National Park Service. August 2003. Specifications for Study Plans Submitted to the Alaska Inventory and Monitoring Program, Alaska Region, National Park Service.

Project Organizer

Deliverable:
Project Organizer Document written and provided in MS Word.

Description:
The project organizer acts much like a web 'home' page – it is the key document for finding all data and documents for the project. Links on the Project Organizer link to the deliverables in the project.

The purpose of the project organizer is to:
- Help project personnel organize and find project documents and data.
- Help park managers access and understand the project data, results and management implications.

Ideally a project novice should be able to open the project organizer links and get all the information needed to safely and efficiently go out and collect, process, analyze and report data for the project.

File naming standards:
File naming standards help in data management by clearly separating at a glance drafts from most current versions. These guidelines apply to all files:
- No spaces or special characters within the name
- Use date for version control, (YYYYMMDD, YYMMDD, or YYMM)
- Use underscore as delimiters
- Keep to about 30 characters or less.

Guidelines:
Project Organizer Template. – A word document that may be downloaded from the internet.

Field Data Sheets

Deliverable:
Field data sheets should be organized into a collection (e.g., in a 3-ring binder or book-box) on an annual basis at a minimum.

Description:
The researcher will provide all completed field datasheets as copies, and preferably, as scanned images of the original data sheets.   At the top of each page on the field sheet will contain the following information:
1) Date
2) Page number (preferably page number of number of pages)
3) Short name of project
4) Name of note taker and observers

Notes should be clearly printed and dark enough to be legible if copied or scanned.

Tabular Data

Deliverable:
- MS Access XP or higher database.
- Database Design and Description written and provided in MS Word.

Description:
The preferred storage of tabular field data is in relational MS Access XP or higher databases. Whenever possible the database design should utilize existing database templates. Contact the Data Manager for the most current template.

If there is no appropriate database template, the data structure should follow the guidelines presented in
The following guidelines:
- Alaska Support Office. 2002. National Park Service, Database Specifications for Inventory and Monitoring Studies.
- Alaska Support Office. 2002. National Park Service, Recommended Database Strategies including I&M Database Templates.
- Alaska Support Office. 2002. National Park Service, Recommended Naming Standards.

These guidelines also describe quality control procedures for data entry.

Database design needs to be reviewed and approved by the Data Manager before data entry is started. The Data Manager will review the database design for consistency with NPS database design strategies and to understand the database. If the Principal Investigator is unfamiliar with relational databases and database design, he or she should contact the Data Manager to make arrangements.

There are instances where other data formats are acceptable, especially where automated data collection instruments minimize or eliminate the possibility of data entry error. In such cases dbf, delimited text or other electronic formats may be acceptable. All non-Access formats must be approved by the park Data Manager prior to initiation of data collection.

If Excel is used, the Excel spreadsheet should follow the Recommended Naming Standards as described in the guidelines above and should be easily imported into Access.

FGDC compliant metadata should be provided for all data. Database design, attribute descriptions, table relationships, and data verification should be provided in a Database Design and Description document.

Data in each database should be reviewed and corrected using an approved verification method, such that data entry accuracy is 95% or greater. A description of the verification method and results will be included in the Database Design and Description document accompanying this database.

GIS Data

Deliverables:
- ArcGIS coverage or shapefile
- Legend data (such as ArcView .avl file)
- Full FGDC compliant metadata
- Map products stored in uncompressed TIF files and PDF
- Related ancillary data

Description:
All field data which has a location associated with data collection should be considered GIS data and GIS data layers should be delivered. Note that many large complex projects produce a relatively small GIS layer. This layer documents data collection sites and store the bulk of the field data in a relational database. Analysis with GIS can create many additional layers. Analysis and summary GIS layers which provide significant insights should be delivered.

All aerial flights over the park should be documented as a GIS flight line layer.

GIS layers should include layers presenting and summarizing the current year's data. If the project spans multiple years, GIS layers should present and summarize the data for the entire project dataset.

GIS layers should be in the NPS Alaska standard datum of NAD27, Alaska Albers Equal Area Projection.

FGDC compliant Metadata for all GIS layers should be provided.

Guidelines:
- National Park Service. 2002. GIS Specifications for Resource Mapping, Inventories and Studies.
- National Park Service. November 2003. GPS for GIS Workflow website. Reviewed 3/16/2004 from http://www.nps.gov/gis/gps/gps4gis/

Photographs

Deliverables:
- Well organized photographs in electronic format (JPG or uncompressed TIF)
- Contact sheet(s) of photos
- ThumbsPlus catalog file with metadata

Purpose:
Photos taken for a project should serve the project's needs. These needs can vary greatly. The projects needs may be driven by site, time, specimen, or method.

Description:
All photographs should be provided in high resolution digital format on CD or DVD, and should be cataloged using ThumbsPlus or other approved cataloging software. Metadata for each photograph should be complete, following the guidelines provided. Medium and low resolution images should be included if they are integrated into the project databases.

Naming Standards:

The naming strategy used for photos should be documented in the Project Organizer, using the naming convention guidelines described above. File names should assist in the linking of the projects data and the photograph. Projects with a limited number of photos (<50) may elect to be descriptive with file names. Projects with larger number of images (>50) may elect a sequential image naming standard. For example: KEFJ_2002_BlackBearStudy_001.jpg Please refer to the guidelines for more specific instructions on managing photographs.

Guidelines:

Photograph Management Specifications for Alaska Inventory and Monitoring Program. 2004. National Park Service.

Data Collection Protocols

Deliverable:

Protocols written and provided in MS Word.

Description:

Data collection protocols should provide detailed descriptions of how the data is collected. They should include (but are not limited to) a complete description how data was collected for each data field on the data collection forms.

Guidelines:

Oakley, Karen, L. Thomas, S Fancy. 2003. Guidelines for Long-term Monitoring Protocols. On website:
    http://science.nature.nps.gov/im/monitor/protocols/ProtocolGuidelines.pdf

Data Documentation

Deliverables:

- Full FGDC compliant metadata for all datasets
- Database Design and Description written and provided in MS Word
- Project tracking log in MS Word or text file.

Description:

FGDC compliant metadata should be provided for all data. Database design, attribute descriptions, table relationships, and data verification should be provided in a Database Design and Description document.

Data in each database should be reviewed and corrected using an approved verification method, such that data entry accuracy is 95% or greater. A description of the verification method and results will be included in the Database Design and Description document accompanying this database.

An explanation of any data processing procedures should be included in the Database Design and Description document. This includes quality assurance/quality control procedures, step-by-step processing steps, and analysis procedures. Use of illustrations, such as screen shots, is encouraged.

A project log is encouraged. The project log gives a day to day description of what was completed and the decisions made, and can be informally written in a Word or text file.

Multi-year projects should provide a detailed description of how and why data processing methods changed.

Guidelines:

- Federal Geographic Data Committee. 2000. Content Standard for Digital Geospatial Metadata Workbook.
- (I&M Specifications for Data Documentation – not written yet)

Information Discovery

(Literature Review/Bibliography/Data Clearinghouse Search)
Deliverable:
Information Discovery Report written and provided in MS Word.

A review of existing literature and data should be done with all projects. A summary of the information discovered through this process should be summarized. This may be included in the Study Plan or Report or written as a separate, informal report.

Project Safety Manual

Deliverable:
Project Safety Manual written and provided in MS Word.

The project safety manual will highlight field and office safety issues specific to the project. Note: the Project Safety Manual may not be appropriate for every science project. Contact the Project Leader for requirements.

Reports

Deliverables:
- Reports written and provided in MS Word.
- Hard copy reports printed as specified.

Description:
Reports should summarize the projects data and review the data analysis in light of related scientific data and theory. Reports should also comment on the potential management implications of the project findings. Key decisions should be documented. Reports submitted to the Inventory and Monitoring Program will be written following the guidelines provided:

Guidelines:
Specifications for annual progress reports and final reports submitted to the Alaska Inventory and Monitoring Program, Alaska Region.

Copies:
An electronic copy of the report in MS Word and any supplement information in MS Office products is required. If desired, these may also be provided in Adobe PDF format, consolidated into one document or a series of documents with logical breaks. The use of bookmarks are encouraged.

For Annual Reports, 2 copies should be provided to the NPS primary contact. For Final Reports, a minimum of 12 copies should be provided to the NPS primary contact. These copies will be distributed to the appropriate libraries.